



MEDICAL SUPPORT FOR ISS CREWMEMBER TRAINING IN STAR CITY, RUSSIA



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Disclosure Information *88th Annual Scientific Meeting* *Natacha Chough*

- I have no financial relationships to disclose.
- I will not discuss off-label use and/or investigational use in my presentation.



MEDICAL SUPPORT FOR ISS CREWMEMBER TRAINING IN STAR CITY, RUSSIA



Outline

- Geography
- Rationale
- Training events requiring medical support
- Physician office capabilities
- Local medical facilities



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Geography

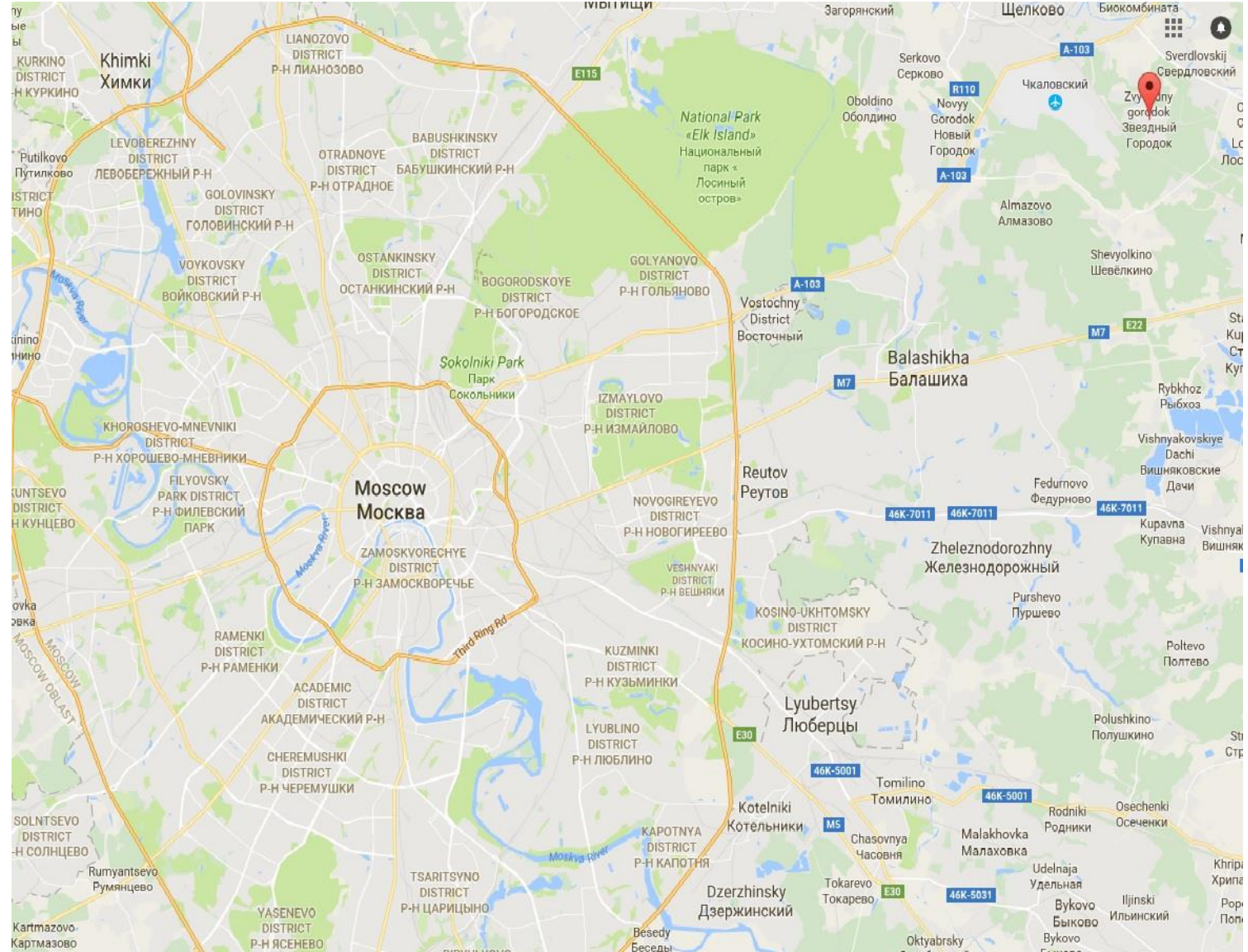




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- Star City = Russian equivalent of JSC
- ~27 miles from Moscow
- Moscow population: ~12 million
- Transport time 1-3hrs, traffic dependent





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Rationale/Role of Flight Surgeon at Gagarin Cosmonaut Training Center (GCTC)

- Provide medical care for illness/injury to astronauts (NASA, CSA, ESA, JAXA), family members/guests, civil servants, & contractors
- Medical advocate for astronauts
- Maintain and operate Star City medical office
- First U.S. physician responder for emergency Soyuz landings



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Training Events Requiring Medical Support

- Altitude chamber, near-vacuum (Sokol suit)
- Centrifuge runs (up to 9Gs)
- Pressurized suited sims (Sokol, intermittent pressurization to 1.4 atm)
- Sokol fit check (2hrs continuous pressurization)
- Orlan suit stand runs
- Braslet fit check
- Seat liner molding
- Russian medical exams prior to hazardous training
- Winter Survival
- Water Survival



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- Altitude chamber

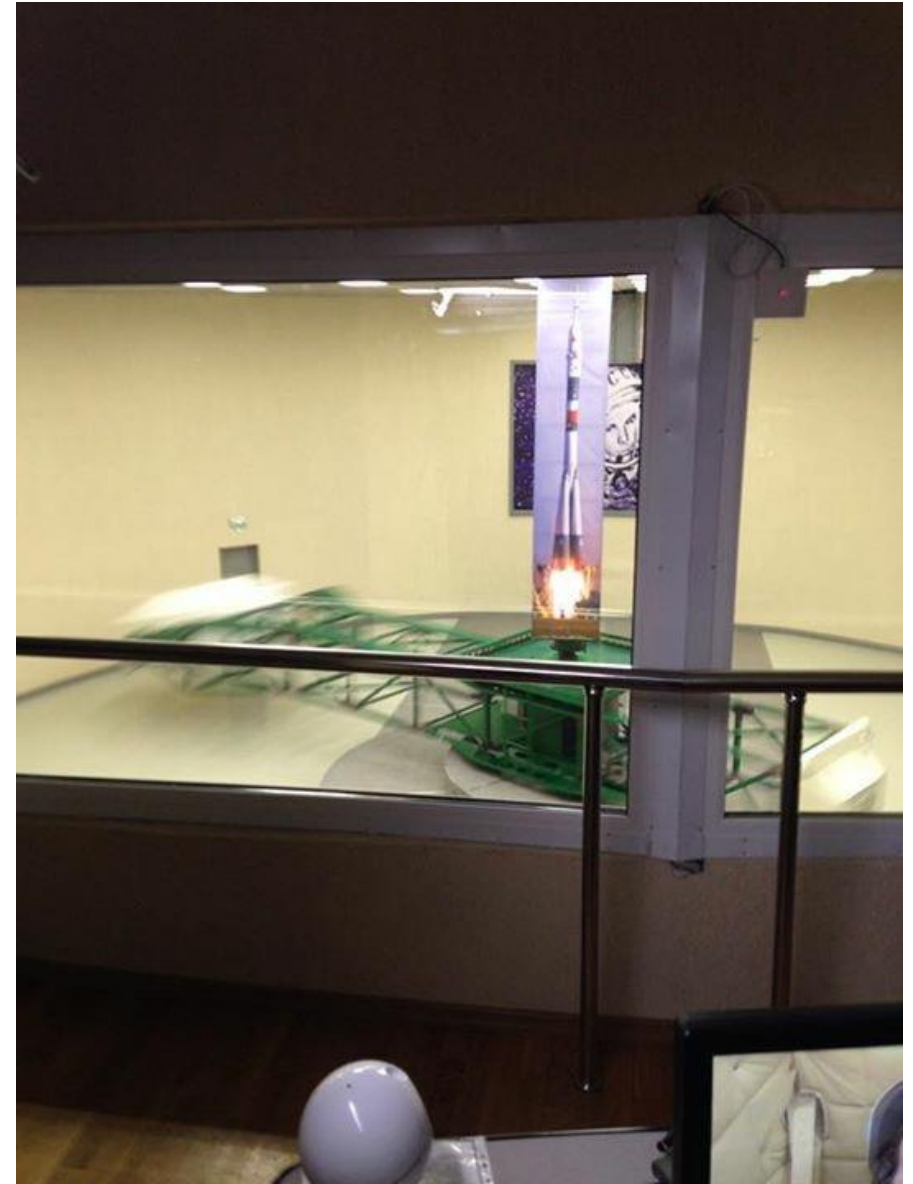
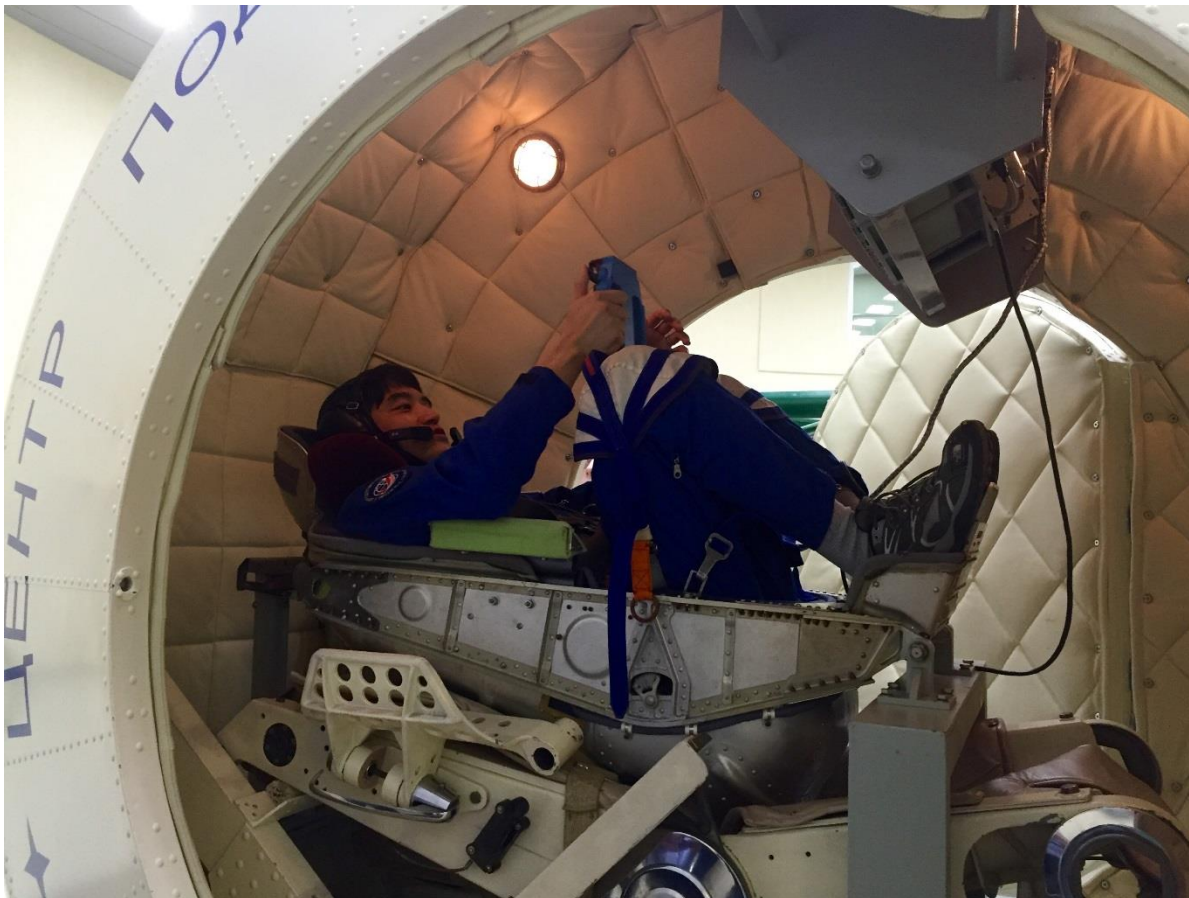




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- Centrifuge run

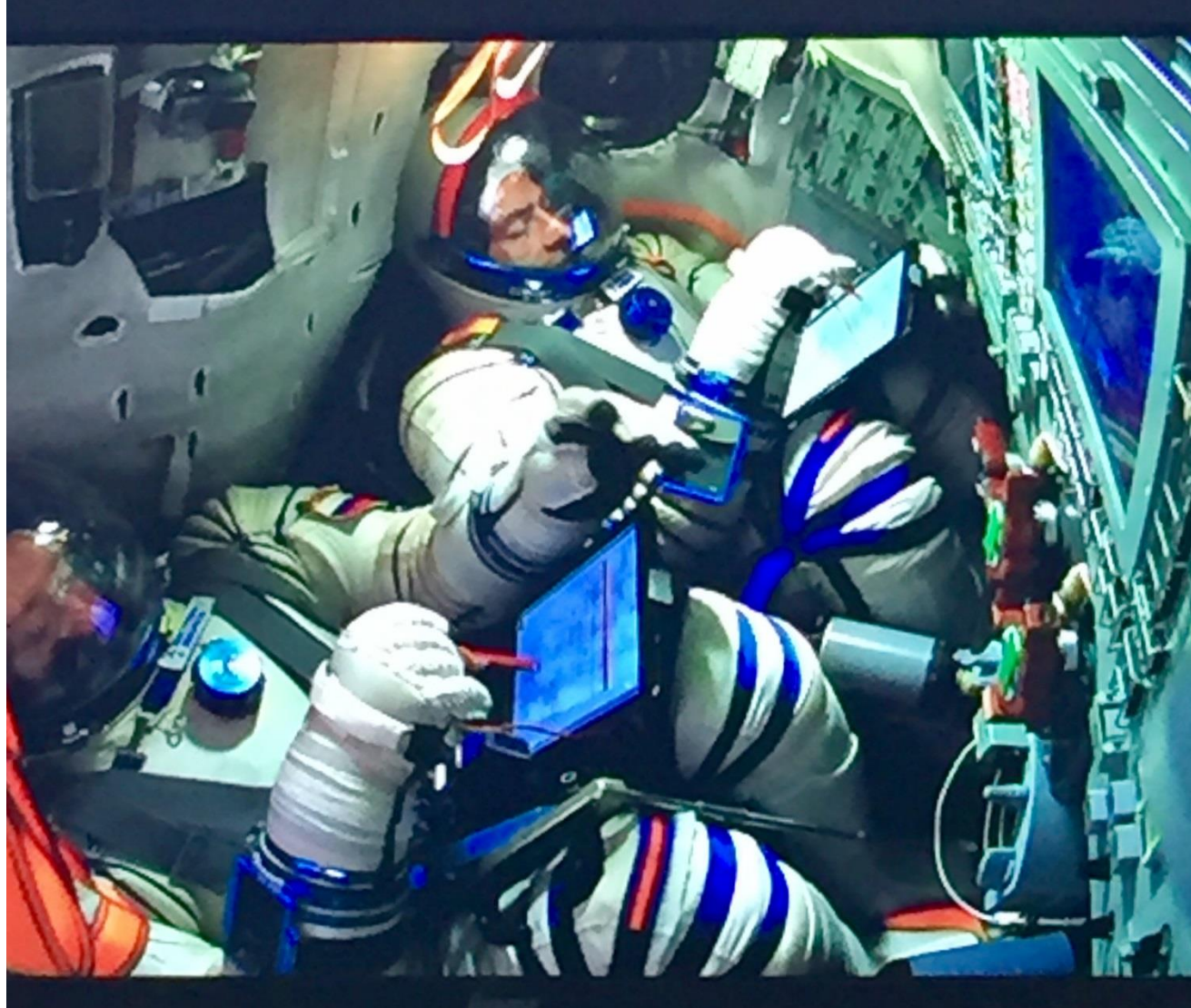




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- Pressurized suited sim

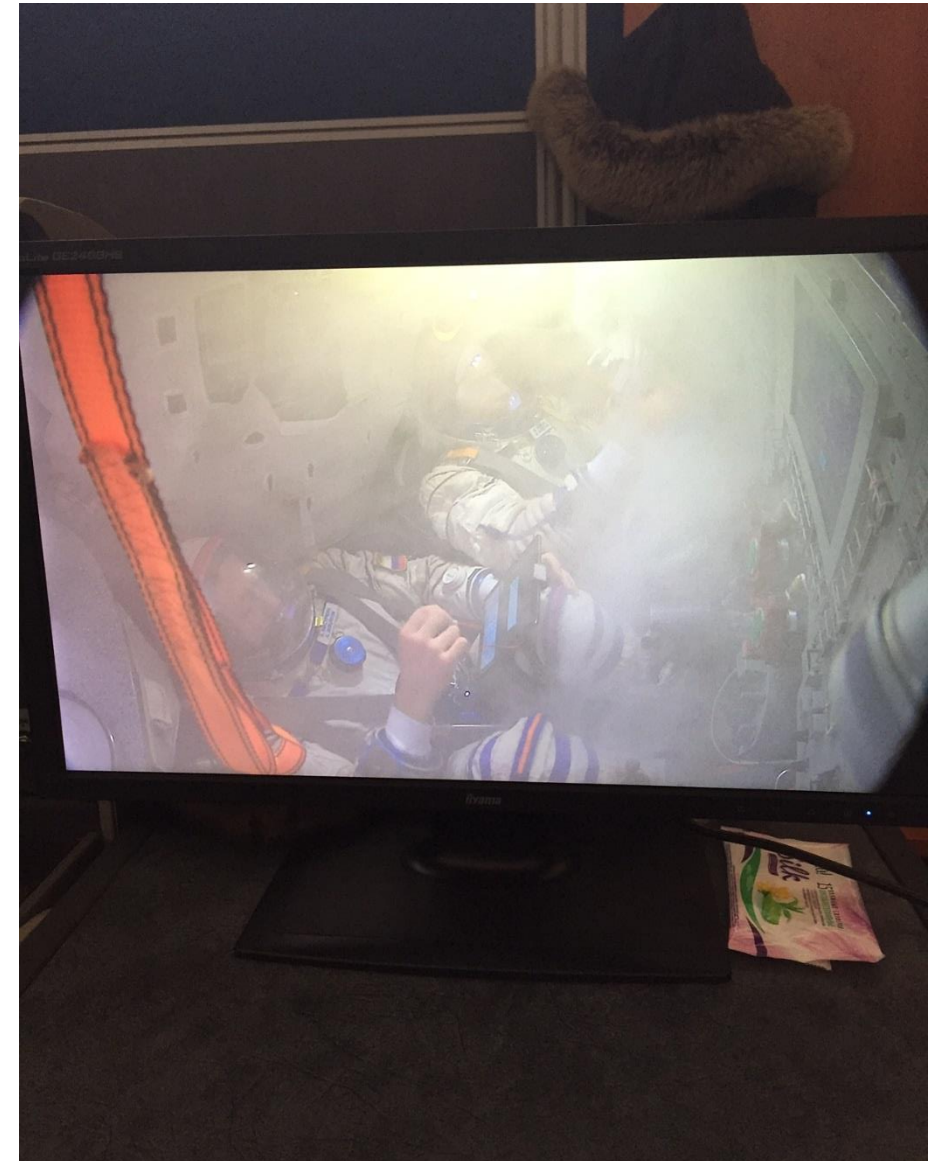
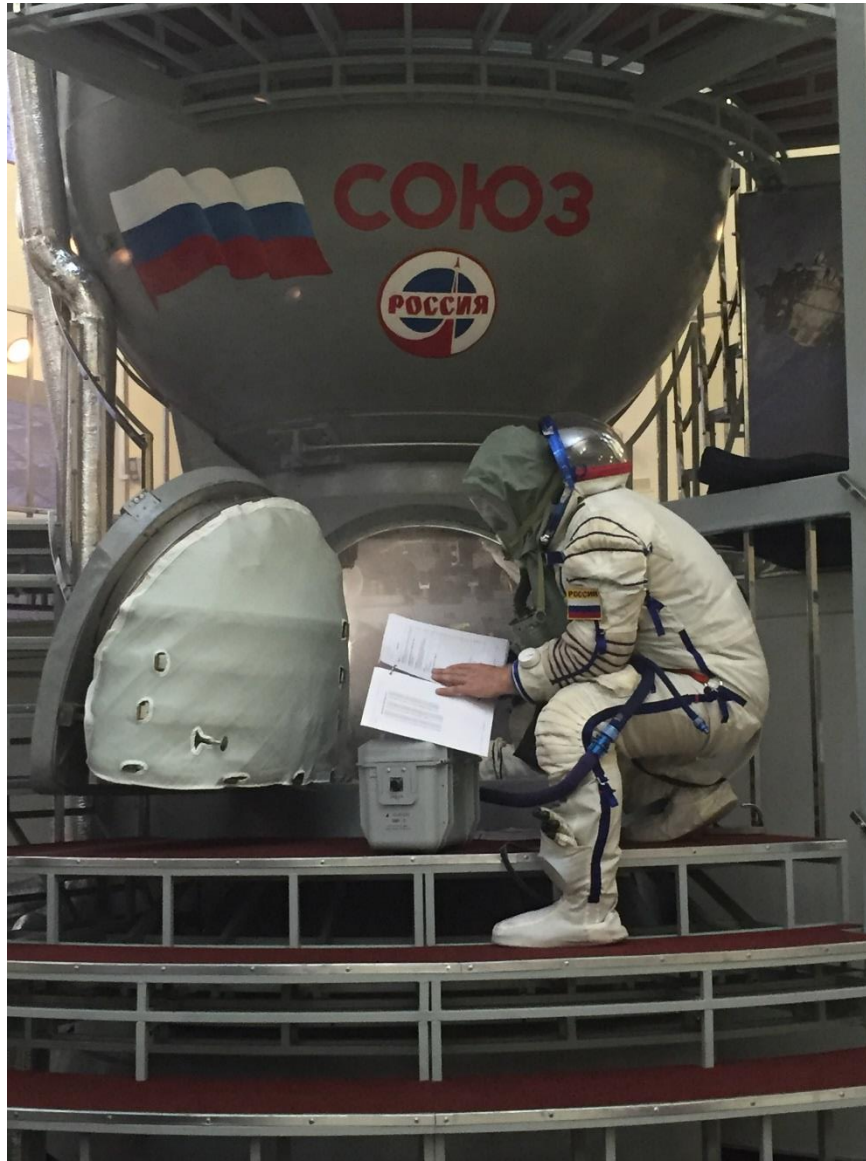




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- Fire sim





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- Sokol fit check





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- Orlan stand run





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- Braslet fit check





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- Seat liner molding





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Star City Physician Office Capabilities

- Urgent care needs
- Medical stabilization prior to transfer/evacuation
- Some ACLS/ATLS capabilities- not comprehensive
- Prepare field medical packs for Soyuz launch/landing





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- Medications





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- Equipment





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Local Medical Facilities

- Star City Polyclinic, 5 min away
 - Ambulances available w/ O2, medics
- Mytishi Hospital, 30-50 min
- European Medical Center*, 1-3 hrs





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Realities of a Potential Hazardous Training Mishap

- Russian and American FS will work together
 - Determine what medical capabilities are available and which facilities are needed
 - We support and attempt to implement our EMS plan as soon as possible/necessary
 - International SOS' recommendations guide our options



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